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KARL G. HANSON 3M OFFICE OF INTELLECTUAL PROP. COUNSEL P.O. BOX 33427 ST. PAUL, MN 55133-3427		ART UNIT PAPER NUMBER	
		3307 10	
		DATE MAILED: 09/12/93	

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

This application has been examined  Responsive to communication filed on 4/30/95  This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), 0 days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

**Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:**

1.  Notice of References Cited by Examiner, PTO-892.
2.  Notice of Draftsman's Patent Drawing Review, PTO-948.
3.  Notice of Art Cited by Applicant, PTO-1449.
4.  Notice of Informal Patent Application, PTO-152.
5.  Information on How to Effect Drawing Changes, PTO-1474..
6.

**Part II SUMMARY OF ACTION**

1.  Claims 25 -> 34 are pending in the application.

Of the above, claims \_\_\_\_\_ are withdrawn from consideration.

2.  Claims 1 -> 24 have been cancelled.

3.  Claims \_\_\_\_\_ are allowed.

4.  Claims 25 -> 34 are rejected.

5.  Claims \_\_\_\_\_ are objected to.

6.  Claims \_\_\_\_\_ are subject to restriction or election requirement.

7.  This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8.  Formal drawings are required in response to this Office action.

9.  The corrected or substitute drawings have been received on \_\_\_\_\_. Under 37 C.F.R. 1.84 these drawings are  acceptable;  not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).

10.  The proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_, has (have) been  approved by the examiner;  disapproved by the examiner (see explanation).

11.  The proposed drawing correction, filed \_\_\_\_\_, has been  approved;  disapproved (see explanation).

12.  Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has  been received  not been received  been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_.

13.  Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14.  Other

**EXAMINER'S ACTION**

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 25-34 are rejected under 35 U.S.C. § 103 as being unpatentable over Dyrud et al.('619) in view of Thiebault.

As to claim 25, Dyrud et al.('619) disclose a fibrous face mask (figs.1-3) for filtering contaminants and/or particulate matter, which comprises: a means (12) for securing the mask to the face of a wearer; and a non-woven fibrous layer (disclosed as a shaping layer) attached to the securing means and containing at least about 40% weight thermally bonding fibers based on the weight of the fibers in the non-woven fibrous layer, at least about 10% weight of the fibers in the non-woven layer being bicomponent fibers, and optionally staple fibers, the non-woven fibrous layer being molded in a cup-shaped configuration. As for the claimed weight ratios of at least 40% weight thermally bonding fibers and

at least 10% weight bicomponent fibers in the non-woven layer, applicant is referred to Dyrud et al. (col.4, lines 29-37) which discloses weight ratios ranging from 0% staple fibers:100% bicomponent fibers to 75% staple fibers:25% bicomponent fibers, a range which includes the claimed values of 40% thermally bonding fibers and 10% bicomponent fibers.

The difference between Dyrud et al. and claim 25 is a fuzz value of not less than 7.5.

-- Thiebault teaches a fibrous face mask (fig.1) which has its fluffy layer smoothed by flattening them using a heated metal mass. The process is done in order to make the mask more comfortable to wear.

It would have been obvious to modify the surface of the mask of Dyrud et al. to flatten the fluffy fibers so that it would be more comfortable to wear as taught by Thiebault.

As for the degree of smoothness expressed as the claimed "surface fuzz value", it is submitted that it would have been obvious to smooth the fibers of Dyrud et al. to any desirable degree including one having a surface fuzz value of not less than 7.5.

As to claim 26, Dyrud et al. as discussed above disclose a wide range of weight percent of fibers making up the non-woven layers which include the claimed weight per cent of fibers. Moreover, Dyrud et al. disclose a plurality of non-woven layers having filtration layer of blown microfibers therebetween (fig.2

and col.6, line 63-col.7, line 20).

As to claims 27-31, the particular values of weight per cent of the bicomponent fibers and the particular surface fuzz value in Dyrud et al. as modified by Thiebault can be arrived at through mere routin experimentation and observation with no criticality seen in the particular values being claimed.

The balance of the claims 32-34 appear to be substantially equivalent in scope to claims 25-31 and are included in Dyrud et al. as modified by Thiebault.

Applicant's arguments filed 01/09/95 have been fully considered but they are not deemed to be persuasive.

Applicant's assertion that the filtration layer of Dyrud et al. do not become bonded together during the molding operation is noted; however, this assertion appears to be inconsistent with any of the claim language since the claims don't appear to require that the fibers of the filtration layer become bonded together during the molding operation.

Applicant's assertion that Dyrud et al. lack any disclosure of the how to maintain low degrees of surface fuzz is agreed with; however, Thiebault does teach the smoothing of surface fuzz. To the extent that Thiebault teaches the smoothing of surface fuzz, it is submitted that the amount of smoothing performed by the smoothing operation can be arrived at through mere routine experimentation and observation with no criticality seen in the particular value of

surface fuzz being claimed.

Applicant's assertion that the Thiebault does not disclose a molded cup shaped configuration is agreed with; however, it is Dyrud et al. which disclose a molded cup shaped configuration as stated herein above with regard to claim 25. Further, any alleged lack of correspondence between layers of Dyrud et al. and Thiebault is irrelevant since neither the claims nor the propriety of the art rejection requires any such correspondence.

Claims 25-34 are rejected under 35 U.S.C. § 112, first and second paragraphs, as the claimed invention is not described in such full, clear, concise and exact terms as to enable any person skilled in the art to make and use the same, and/or for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There is no evidence in the record that this term (i.e. "surface fuzz value") is an accepted term or test by those skilled in the art. It is noted that in applicant's determination of this value that applicant makes two tests and averages the results of these tests to arrive at a value. Therefore, when two testers who obviously are trying to be as accurate as possible can likely arrive at different results, there is no assurance that those skilled in the art would be able to conclude with a reasonable degree of certainty whether or not this language (i.e. "surface fuzz value") was infringed.

Accordingly, this terminology is not taught in such a way as to enable those in the art to reliably determine surface fuzz values and also fails to point out and distinctly claim as required by 35 USC 112 second paragraph.

Applicants' arguments filed 06/30/95 have been fully considered but they are not deemed to be persuasive.

Applicants' assertion that Thiebault only discusses the reduction of surface fuzz in a filtration layer may be accurate; however, it is irrelevant because it is not commensurate with the language of the claims. That is, none of claims 25-34 specify that each and every layer of the fibrous face mask of the instant invention has been subjected to a reduction in surface fuzz.

Applicants' assertion that the filtration layer (1) is not molded into a cup-shaped configuration as claimed by applicants' is disagreed with because of the Thiebault (fig.1) illustrates the filtration layer molded into a cup-shape configuration of a face mask. Moreover, Dyrud et al., as discussed above, also discloses such a cup-shaped configuration in figs.1 and 3.

Applicants' assertion that neither Dyrud et al. nor Thiebault disclose how to maintain low surface fuzz values in a molded shaping layer may be accurate with particular respect to a molded shaping layer; however, this assertion is irrelevant because it is not commensurate with the claim language. That is, none of claims 25-34 define a molded shaping layer nor do claims 25-34 define how

to maintain low surface fuzz values in a molded shaping layer in particular.

Applicants' assertion that neither Dyrud et al. nor Thiebault disclose any motivation for reducing surface fuzz in a shaping may be accurate with particular respect to a molded shaping layer; however, this assertion is irrelevant because it is not commensurate with the claim language. That is, none of claims 25-34 define a molded shaping layer nor do claims 25-34 define any motivation for reducing surface fuzz in a shaping layer in particular. It is submitted that Dyrud et al. as modified by Thiebault teaches the reduction of surface fuzz in a fibrous face mask.

Applicants' assertion that Thiebault reduces surface fuzz in the filtration layer to eliminate the need for a porous surface covering does not appear to be entirely accurate. Thiebault (col.1, lines 61-col.2, line 2) discloses "It is an object of the present invention to remove the fluffy surface appearance from the filtering layer and to form, without any addition, a porous skin which can be unclogged and which does not increase the depression so that, if the layer constitutes a mask, it is comfortable and pleasant to wear and the wearer can breathe without any hindrance.". It is clear from this disclosure that Thiebault also reduces surface fuzz in order to make the mask more comfortable and pleasant to wear for a wearer.

In summary, for the reasons cited herein above, applicants'

conclusion that Dyrud et al. as modified by Thiebault does not render obvious claims 25-34 of the instant invention is believed to be inaccurate.

Applicants' assertion that no cognizant reasoning has been put forth explaining why a person skilled in the art cannot make and use the invention is disagreed with. The rejection of claims 25-34 under 35 USC 112 second paragraph is based in part on the assertion that one of ordinary skill in the art cannot make and use the invention. This rejection is also based upon the assertion that applicant has failed to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The reasons for making such a rejection are set forth herein above beginning on page 5.

The second paragraph of 35 USC 112 requires that an applicant point out and distinctly claim what applicant regards as the invention and with particular respect to the term "surface fuzz value", applicants have failed in their attempt to do so. On pages 16-18 of the specification of the instant application, a test for determining surface fuzz value is disclosed which is based upon the subjective judgement of two separate testers who average their results to arrive at a particular surface fuzz value. Since such results can likely be different and there can be no assurance that those skilled in the art would be able to conclude with a reasonable degree of certainty whether or not this language (i.e. surface fuzz value) was infringed, claims 25-34 continue to be

deemed indefinite under 35 USC 112 second paragraph.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

Any inquiry concerning this communication should be directed to Aaron J. Lewis at telephone number (703) 308-0716.

Aaron J. Lewis  
September 11, 1995

*Aaron J. Lewis*  
AARON J. LEWIS  
EXAMINER  
ART UNIT 337